



[4910-13-P]

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2013-0329; Directorate Identifier 2012-NM-032-AD;**

**Amendment 39-17596; AD 2013-19-14]**

**RIN 2120-AA64**

**Airworthiness Directives; Airbus Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), Department of Transportation (DOT).

**ACTION:** Final rule.

**SUMMARY:** We are superseding Airworthiness Directives (ADs) 2009-04-07 and 2011-02-09 for certain Airbus Model A330-200, A330-200 Freighter, A300-300, A340-200, A340-300, A340-500, and A340-600 series airplanes. AD 2009-04-07 required revising the airplane flight manual (AFM) to include appropriate operational procedures to prevent the air data inertial reference unit (ADIRU) from providing erroneous data to other airplane systems. AD 2011-02-09 required revising the AFM to provide appropriate operational procedures to prevent the airplane flight directors (FDs), autopilot (AP), and auto-thrust re-engagement in the event of airspeed sources providing similar but erroneous data. This new AD requires that operators modify or replace all three flight control primary computers (FCPCs) with new software standards. Since we issued ADs 2009-04-07 and 2011-02-09, we have determined that new software standards for the FCPCs are necessary to inhibit autopilot re-engagement under

unreliable airspeed conditions. This new AD also removes certain airplanes from the applicability. We are issuing this AD to prevent autopilot engagement under unreliable airspeed conditions, which could result in reduced controllability of the airplane.

**DATES:** This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain other publications listed in this AD as of February 9, 2011 (76 FR 4219, January 25, 2011).

The Director of the Federal Register approved the incorporation by reference of certain other publications listed in this AD as of March 5, 2009 (74 FR 7549, February 18, 2009).

**ADDRESSES:** You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC.

For service information identified in this AD, contact Airbus SAS – Airworthiness Office – EAL, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 45 80; email [airworthiness.A330-A340@airbus.com](mailto:airworthiness.A330-A340@airbus.com); Internet <http://www.airbus.com>.

**FOR FURTHER INFORMATION CONTACT:** Vladimir Ulyanov, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, Washington 98057-3356; telephone 425-227-1138; fax 425-227-1149.

**SUPPLEMENTARY INFORMATION:**

**Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to the specified products. The NPRM was published in the Federal Register on April 16, 2013 (78 FR 22432), and proposed to supersede AD 2009-04-07, Amendment 39-15813 (74 FR 7549, February 18, 2009); and AD 2011-02-09, Amendment 39-16583 (76 FR 4219, January 25, 2011). The NPRM proposed to correct an unsafe condition for the specified products.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA AD 2011-0199R1, dated February 17, 2012 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

It has been determined that, when there are significant differences between all airspeed sources, the flight controls of an Airbus A330 or A340 aeroplane will revert to alternate law, the autopilot (AP) and the auto-thrust (A/THR) automatically disconnect, and the Flight Directors (FD) bars are automatically removed.

Further analyses have shown that, after such an event, if two airspeed sources become similar while still erroneous, the flight guidance computers will display the FD bars

again, and enable the re-engagement of AP and A/THR. However, in some cases, the AP orders may be inappropriate, such as possible abrupt pitch command.

In order to prevent such events which may, under specified circumstances, constitute an unsafe condition, EASA issued AD 2010-0271 [<http://ad.easa.europa.eu/ad/2010-0271>] [which corresponds to FAA AD 2011-02-09, Amendment 39-16583 (76 FR 4219, January 25, 2011)] to require an amendment of the Flight Manual to ensure that flight crews apply the appropriate operational procedure.

Since that [EASA] AD was issued, new FCPC software standards have been developed that will inhibit autopilot engagement under unreliable airspeed conditions.

Consequently, EASA issued AD 2011-0199 to require software standard upgrade of the three FCPCs by either modification or replacement, as follows:

- software standard P11A/M20A on FCPC 2K2 hardware for A330-200/-300 aeroplanes [with electrical rudder], through Airbus Service Bulletin (SB) A330-27-3176,
- software standard P12A/M21A on FCPC 2K1 hardware and M21A on FCPC 2K0 hardware for A330-200/-300 aeroplanes [with mechanical rudder], through Airbus SB A330-27-3177,
- software standard L22A on FCPC 2K1 hardware and L22A on FCPC 2K0 hardware for A340-200/-300 aeroplanes [with mechanical rudder], through Airbus SB A340-27-4174, and
- software standard L21A on FCPC 2K2 hardware for A340-300 aeroplanes [with electrical rudder], through Airbus SB A340-27-4162.

\* \* \* \* \*

EASA has also issued MCAI 2013-0107, dated May 17, 2013, which states:

An A330 aeroplane experienced a sudden nose down movement while in cruise. This event was preceded by an automatic autopilot disconnection, which triggered the “NAV IR1 FAULT” Electronic Centralised Aircraft Monitor (ECAM) Caution. Investigation results highlighted that at the time of the event, the Air Data Reference 1 (ADR) part of ADIRU1 was providing erroneous and temporary wrong parameters in a random manner. This abnormal behavior of the ADR1 led to several consequences such as unjustified stall and over speed warnings, loss of attitude information on Captain Primary Flight Display (PFD) and several ECAM warnings. Among the abnormal parameters, the provided Angle of Attack (AoA) value was such that the flight control computers commanded the sudden nose down movement.

Further investigation results concluded that this event was caused by erroneous and undetected AoA values (spikes) generated by the ADIRU1.

This condition, if not corrected, could lead to further similar occurrences, possibly resulting in loss of control of the aeroplane.

To address this potential unsafe condition and as an interim solution, EASA issued Emergency AD 2009-0012-E [<http://ad.easa.europa.eu/ad/2009-0012-E>] to require implementation of an aircraft Flight Manual (AFM) operational procedure, to isolate both the Inertial Reference (IR) and ADR in case a faulty IR is detected.

Since that [EASA] AD was issued, a final fix solution was developed, consisting of new FCPC software standards, which prevents the potential unsafe condition and cancels the AFM operational procedure required by EASA AD 2009-0012-E. Consequently, EASA issued AD 2011-0199R1 to require this software standard upgrade of the three FCPCs by either modification or replacement, for A330 and A340-200/-300 aeroplanes.

Due to similar design, Airbus A340-500/-600 aeroplanes are also impacted by this issue, and Airbus developed Service Bulletin (SB) A340-27-5051 which gives instructions for a software standard upgrade of the three FCPCs, irrespective of ADIRU manufacturer.

For the reasons described above, this AD requires a software standard upgrade of the three FCPCs for A340-500/-600 aeroplanes, which cancels the operational procedure imposed by EASA AD 2009-0012-E.

You may obtain further information by examining the MCAI in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2013-0329-0003>.

### **Comments**

We gave the public the opportunity to participate in developing this AD. We considered the comments received.

### **Support for the NPRM (78 FR 22432, April 16, 2013)**

The Air Line Pilots Association International supported the intent of the NPRM (78 FR 22432, April 16, 2013).

Michael Carrera agreed with the requirements of the NPRM (78 FR 22432, April 16, 2013).

### **Request to Include EASA AD 2013-0107, dated May 17, 2013, in the NPRM (78 FR 22432, April 16, 2013)**

Airbus stated that EASA has issued AD 2013-0107, issued May 17, 2013, and requested that we include the equivalent actions in this AD. Airbus stated that the requirements of EASA AD 2013-0107 are for Model A340-500 and -600 airplanes and are equivalent to the requirements of this AD for Model A330 and A340-200 and -300 airplanes. Airbus stated that the actions required by EASA AD 2013-0107 enables a supersedure action required by FAA AD 2009-04-07, Amendment 39-15813 (74 FR 7549, February 18, 2009). Airbus also stated that for Model A340-541 and A340-642

airplanes, the actions required by EASA AD 2013-0107 terminate the requirements of paragraph (g) of the NPRM (78 FR 22432, April 16, 2013) and AD 2009-04-07.

We agree that EASA AD 2013-0107 mandates similar actions for Model A340-541 and A340-642 airplanes and eliminates the same revisions of the AFM as mandated by FAA AD 2009-04-07, Amendment 39-15813 (74 FR 7549, February 18, 2009). Although there are no Model A340-541 or A340-642 airplanes currently registered in the U.S., we have included the requirements of EASA AD 2013-0107 (which specifies to modify or replace certain FCPCs in accordance with Airbus Service Bulletin A340-27-5051) in this final rule, and have added Model A340-541 and A340-642 airplanes to paragraph (c)(2) of this final rule. We have also added new paragraph (j) to this final rule to include actions specified in Airbus Mandatory Service Bulletin A340-27-5051, dated July 16, 2012, for Model A340-541 and A340-642 series airplanes. Subsequent paragraphs have been redesignated accordingly. In addition, we have clarified paragraphs (i)(3) and (i)(4) of this final rule to state that the actions specified in paragraphs (i)(3) and (i)(4) of this final rule apply to Model A340-200 and -300 series airplanes.

**Request to Include the Equivalent Mandatory Actions of EASA AD 2012-0271, dated December 21, 2012, in the NPRM (78 FR 22432, April 16, 2013)**

Airbus stated that EASA has issued AD 2012-0271, dated December 21, 2012, on the same subject and requested that the equivalent mandatory actions be included in this AD. EASA AD 2012-0271 requires installation of the FCPC multi role transport tanker (MRTT2) standard applicable to Model A330 airplanes on which Airbus Service Bulletin A330-27-3156 has been embodied. Airbus stated that this requirement for Model A330

MRTT airplanes is equivalent to one in the NPRM (78 FR 22432, April 16, 2013) for other Model A330 airplanes. The commenter stated that this action enables the supersedure of the actions required by FAA AD 2009-04-07, Amendment 39-15813 (74 FR 7549, February 18, 2009); and AD 2011-02-09, Amendment 39-16583 (76 FR 4219, January 25, 2011); and terminates the requirements of paragraphs (g) and (h) of the NPRM (78 FR 22432, April 16, 2013).

We disagree with including the requested actions in this final rule. EASA AD 2012-0271, issued December 21, 2012, requires modification or replacement of the three FCPCs to install software standard MRTT2 on Model A330-200 airplanes with commercial designation MRTT. We have not type-validated Model A330-200 MRTT airplanes and that model is not on the FAA type certificate data sheet. We have not taken actions in regard to EASA AD 2012-0271 related to Model A330-200 MRTT airplanes for that reason. No change has been made to this final rule in this regard.

#### **Request to Update AFM Temporary Revision (TR) References**

Airbus requested that we update the references for the AFM TRs. Airbus stated that the references for the AFM TRs have been changed.

We disagree with changing the references for the AFM TRs in this final rule. The new designation of the AFM TRs was introduced after the publication of AD 2009-04-07, Amendment 39-15813 (74 FR 7549, February 18, 2009). Changing the references could cause misunderstanding or confusion. No change has been made to this final rule in this regard.



## **Conclusion**

We reviewed the available data, including the comments received, and determined that air safety and the public interest require adopting this AD with the changes described previously and minor editorial changes. We have determined that these changes:

- Are consistent with the intent that was proposed in the NPRM (78 FR 22432, April 16, 2013) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (78 FR 22432, April 16, 2013).

## **Related AD**

Accomplishing the actions specified in paragraphs (i)(1) through (i)(4) of this final rule is compliant with the optional actions specified in paragraphs (l) and (o)(1) through (o)(4) of AD 2013-05-08, Amendment 39-17380 (78 FR 27015, May 9, 2013).

## **Costs of Compliance**

We estimate that this AD affects about 59 products of U.S. registry.

The actions that are required by AD 2009-04-07, Amendment 39-15813 (74 FR 7549, February 18, 2009), and retained in this AD take about 1 work-hour per product, at an average labor rate of \$85 per work hour. Required parts cost about \$0 per product. Based on these figures, the estimated cost of the actions that were required by AD 2009-04-07 is \$85 per product.

The actions that are required by AD 2011-02-09, Amendment 39-16583 (76 FR 4219, January 25, 2011), and retained in this AD take about 1 work-hour per product, at an average labor rate of \$85 per work hour. Required parts cost about \$0 per product.

Based on these figures, the estimated cost of the actions currently required by AD 2011-02-09 is \$85 per product.

We estimate that it takes about 5 work-hours per product to comply with the new basic requirements of this AD. The average labor rate is \$85 per work-hour. Required parts would cost about \$0 per product. Where the service information lists required parts costs that are covered under warranty, we have assumed that there will be no charge for these parts. As we do not control warranty coverage for affected parties, some parties may incur costs higher than estimated here. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$25,075, or \$425 per product.

#### **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

## **Regulatory Findings**

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

## **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2013-0329>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the MCAI, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is in the ADDRESSES section.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by:

(a) Removing airworthiness directive (AD) 2009-04-07, Amendment 39-15813 (74 FR 7549, February 18, 2009), and AD 2011-02-09, Amendment 39-16583 (76 FR 4219, January 25, 2011); and

(b) Adding the following new AD:

**2013-19-14 Airbus:** Amendment 39-17596. Docket No. FAA-2013-0329; Directorate Identifier 2012-NM-032-AD.

#### **(a) Effective Date**

This airworthiness directive (AD) becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

This AD supersedes AD 2009-04-07, Amendment 39-15813 (74 FR 7549, February 18, 2009); and AD 2011-02-09, Amendment 39-16583 (76 FR 4219,

January 25, 2011).

**(c) Applicability**

This AD applies to the Airbus airplanes, certificated in any category, as identified in paragraphs (c)(1) and (c)(2) of this AD.

(1) Model A330-223F, -243F, -201, -202, -203, -223, -243, -301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes; except those on which Airbus Modification 201654 has been embodied in production, or Airbus Service Bulletin A330-27-3156 has been incorporated in service.

(2) All Model A340-211, -212, -213, -311, -312, -313, -541, and 642 airplanes.

**(d) Subject**

Air Transport Association (ATA) of America Code 27, Flight controls.

**(e) Reason**

This AD was prompted by the possibility that, due to significant differences among all airspeed sources, the flight controls will revert to alternate law, the autopilot (AP) and the auto-thrust (A/THR) automatically disconnect, and the flight director (FD) bars are automatically removed. Then, if two airspeed sources become similar while still erroneous, the flight guidance computers will display the FD bars again, and enable the re-engagement of the AP and A/THR. In some cases, however, the AP orders may be inappropriate, such as possible abrupt pitch command. We are issuing this AD to prevent autopilot engagement under unreliable airspeed conditions, which could result in reduced controllability of the airplane.

**(f) Compliance**

You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

**(g) Retained Airplane Flight Manual (AFM) Revision: Certain NAV Faults or ATT Flag on PFD**

This paragraph restates the actions required by paragraph (f) of AD 2009-04-07, Amendment 39-15813 (74 FR 7549, February 18, 2009). For all airplanes except Model A330-223F and -243F airplanes: Within 14 days after March 5, 2009 (the effective date of AD 2009-04-07), revise the applicable section of the A330 or A340 (Airbus) Flight Manual (FM) by inserting a copy of A330 (Airbus) Temporary Revision (TR) 4.02.00/46, or A340 (Airbus) TR 4.02.00/54, both Issue 3, both dated January 13, 2009, as applicable. Thereafter, operate the airplane according to the limitations and procedures in the TRs. When information identical to that in the TR has been included in the general revisions of the FM, the general revisions may be inserted in the FM, and the TR may be removed.

**(h) Retained AFM Revision: Alternate Law Associated with AP and A/THR Disconnection**

This paragraph restates the actions required by paragraph (g) of AD 2011-02-09, Amendment 39-16583 (76 FR 4219, January 25, 2011). Within 15 days after February 9, 2011 (the effective date of AD 2011-02-09), do the actions in paragraph (h)(1) or (h)(2) of this AD.

(1) Revise the Limitations and Abnormal Sections of the Airbus A330/A340 AFM to include the following statement and operate the airplane according to these limitations and procedures. This may be done by inserting a copy of this AD in the AFM. When a statement identical to that in figure 1 to paragraph (h)(1) of this AD has been

included in the general revisions of the Limitations and Abnormal Sections of the AFM, the general revisions may be inserted into the AFM, and the copy of this AD may be removed from the AFM.

**Figure 1 to Paragraph (h)(1) of this AD: *Procedure***

**PROCEDURE:**

When autopilot and auto-thrust are automatically disconnected and flight controls have reverted to alternate law:

- Do not engage the AP and the A/THR, even if FD bars have reappeared

- Do not follow the FD orders

- ALL SPEED INDICATIONS-X-CHECK

- If unreliable speed indication is suspected:

- UNRELIABLE SPEED INDIC/ADR CHECK  
PROC APPLY

- If at least two ADRs provide reliable speed indication for at least 30 seconds, and the aircraft is stabilised on the intended path:

AP/FD and A/THR As required

(2) Revise the Limitations and Abnormal Sections of the Airbus A330/A340 AFM to include the information in Airbus A330/A340 TR TR149 (for Model A330 airplanes) or TR TR150 (for Model A340-200 and -300 series airplanes), both Issue 1.0, both dated December 20, 2010. These TRs introduce procedures for operation of the auto pilot and auto-thrust disconnect. Operate the airplane according to the limitations and

procedures in the TRs. This may be done by inserting copies of Airbus A330/A340 TR TR149 or TR150, both Issue 1.0, both dated December 20, 2010; as applicable; into the Airbus A330/A340 AFM. When these TRs have been included in general revisions of the AFM, the general revisions may be inserted in the AFM, and the TRs may be removed.

**(i) New Software Standard Upgrade for Model A330 Series Airplanes, and Model A340-200 and -300 Series Airplanes**

Within 10 months after the effective date of this AD, upgrade (by modification or replacement, as applicable) the three flight control primary computers (FCPCs), as specified in paragraphs (i)(1), (i)(2), (i)(3), and (i)(4) of this AD, as applicable. Accomplishment of the applicable requirements of this paragraph terminates the requirements of paragraphs (g) and (h) of this AD. Accomplishing the actions specified in paragraphs (i)(1) through (i)(4) of this AD are compliant with the optional actions specified in paragraphs (l) and (o)(1) through (o)(4) of AD 2013-05-08, Amendment 39-17380 (78 FR 27015, May 9, 2013).

(1) For Model A330 series airplanes: Upgrade to software standard P11A/M20A on FCPC 2K2 hardware, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-27-3176, Revision 02, dated April 24, 2012.

(2) For Model A330 series airplanes: Upgrade to software standard P12A/M21A on FCPC 2K1 hardware, and software standard M21A on FCPC 2K0 hardware, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-27-3177, dated December 21, 2011.

(3) For Model A340-200 and -300 series airplanes: Upgrade to software standard L22A on FCPC 2K1 hardware, and software standard L22A on FCPC 2K0 hardware, in



accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A340-27-4174, dated November 21, 2011.

(4) For Model A340-200 and -300 series airplanes: Upgrade to software standard L21A on FCPC 2K2 hardware, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A340-27-4162, Revision 01, dated September 17, 2012.

**(j) New Software Standard Upgrade for Model A340-541 and -642 Series Airplanes**

(1) Within 10 months after the effective date of this AD, modify or replace the three FCPCs to integrate software standard W12 on FCPC 2K2 hardware, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A340-27-5051, dated July 16, 2012. Accomplishment of the applicable requirements of this paragraph terminates the requirements of paragraphs (g) and (h) of this AD.

(2) After accomplishing the modification in accordance with paragraph (j)(1) of this AD, do not install an FCPC on the airplane unless the FCPC is 2K2 hardware with integrating software standard W12.

**(k) Credit for Previous Actions**

(1) This paragraph provides credit for the actions specified in paragraph (i)(1) of this AD, if those actions were performed before the effective date of this AD using Airbus Mandatory Service Bulletin A330-27-3176, dated July 26, 2011; or Airbus Mandatory Service Bulletin A330-27-3176, Revision 01, dated March 27, 2012; which are not incorporated by reference in this AD.

(2) This paragraph provides credit for the actions specified in paragraph (i)(4) of this AD, if those actions were performed before the effective date of this AD using

Airbus Mandatory Service Bulletin A340-27-4162, dated January 10, 2012, which is not incorporated by reference in this AD.

**(l) Other FAA AD Provisions**

The following provisions also apply to this AD:

**(1) Alternative Methods of Compliance (AMOCs):** The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Branch, send it to ATTN: Vladimir Ulyanov, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, Washington 98057-3356; telephone 425-227-1138; fax 425-227-1149. Information may be emailed to: [9-ANM-116-AMOC-REQUESTS@faa.gov](mailto:9-ANM-116-AMOC-REQUESTS@faa.gov). Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

**(2) Airworthy Product:** For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

**(m) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) European Aviation Safety Agency Airworthiness Directives 2011-0199R1, dated February 17, 2012; and 2013-0107, dated May 17, 2013; for related information. The MCAI can be found in the AD docket on the Internet at

<http://www.regulations.gov/#!documentDetail;D=FAA-2013-0329-0003>.

(2) Service information that is referenced in this AD that is not incorporated by reference in this AD may be viewed at the addresses identified in paragraphs (n)(6) and (n)(7) of this AD.

**(n) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(3) The following service information was approved for IBR on [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(i) Airbus Mandatory Service Bulletin A330-27-3176, Revision 02, dated April 24, 2012.

(ii) Airbus Mandatory Service Bulletin A330-27-3177, dated December 21, 2011.

(iii) Airbus Mandatory Service Bulletin A340-27-4162, Revision 01, dated September 17, 2012.

(iv) Airbus Mandatory Service Bulletin A340-27-4174, dated November 21, 2011.

(v) Airbus Mandatory Service Bulletin A340-27-5051, dated July 16, 2012.

(4) The following service information was approved for IBR on February 9, 2011 (76 FR 4219, January 25, 2011).

(i) Airbus A330/A340 Temporary Revision TR149, Issue 1.0, dated December 20, 2010, to the Airbus A330/A340 Airplane Flight Manual.

(ii) Airbus A330/A340 Temporary Revision TR150, Issue 1.0, dated December 20, 2010, to the Airbus A330/A340 Airplane Flight Manual.

(5) The following service information was approved for IBR on March 5, 2009 (74 FR 7549, February 18, 2009).

(i) Airbus A330 Temporary Revision 4.02.00/46, Issue 3, dated January 13, 2009, to the Airbus A330 Airplane Flight Manual.

(ii) Airbus A340 Temporary Revision 4.02.00/54, Issue 3, dated January 13, 2009, to the Airbus A340 Airplane Flight Manual.

(6) For service information identified in this AD, contact Airbus SAS – Airworthiness Office – EAL, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 45 80; email [airworthiness.A330-A340@airbus.com](mailto:airworthiness.A330-A340@airbus.com); Internet <http://www.airbus.com>.

(7) You may view copies of the service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(8) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:

<http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on September 13, 2013.

Jeffrey E. Duven,  
Acting Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

[FR Doc. 2013-26565 Filed 11/13/2013 at 8:45 am; Publication Date: 11/14/2013]